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Preparing for a Downturn: Three Steps Engineering Can Take Today

Do the drumbeats sound familiar? You know the sound – where the news reports become more dismal, you hear of customers pushing out deliveries, and requisitions suddenly take much longer to be approved? That is the sound of a downturn on the horizon! Other than making sure your resume is polished, what should an engineering manager or project manager be doing to prepare?

This article discusses three critical steps to help engineering organizations get ready for downturns:

1. Prepare for changes in the product roadmap
2. Organize for delayed funding decisions
3. Develop an effective outsourcing strategy.

An effective engineering manager must understand where the company is in the current business cycle and will prepare his team to adapt to the changing market demands.

Prepare for Changes in The Product Roadmap

The most common mistake many engineering managers make is ignoring the warning signs and blindly executing against current plans. Management hasn't told you anything has changed, so you continue to push your group, accelerate the schedule, flog the suppliers, and focus relentlessly on the roadmap.

These managers are completely caught by surprise when the "official word" comes that the industry has entered a downturn. It may take months for them to retool their groups and revise their plans to the new reality. Many engineering organizations are trained to valiantly fight all changes in the plan. Their emphasis is to leverage resources on projects that have the greatest long-term benefits and minimize distractions by not engaging in customer specials. They are slow to recognize that when the industry enters a downturn, project priorities change rapidly and unpredictably.

During an upturn, the organization has the luxury of staying focused on the roadmap even at the cost of losing some sales to maximize long-term results. In a downturn, every revenue opportunity is critical. If a new feature is needed to close the sale, the priority on that new project skyrockets. The product roadmap is still important, but now short-term revenue opportunities have much greater weight. Recognizing this shift early will save the engineering manager endless struggles and confrontations with marketing and sales. During a downturn, engineering must dedicate some portion of the resources to "rapid response" to enable short-term sales objectives. Since funding is only approved if the sale is made, engineering must have a detailed implementation plan and stay in close contact with sales to determine when the



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program is likely to be funded. Establishing the communication link with sales and setting aside “rapid response” resources should be done early in the downturn.

Organize for Rapid Engineering Response

The second mistake often made as the industry enters a downturn is not recognizing how the downturn will change schedule requirements. While, in general, the urgency of getting new products to market quickly in a downturn is reduced, for particular projects the importance of rapid execution increases. This is because management’s willingness to commit funds is inherently more conservative in a downturn. The market and opportunities are changing rapidly and management will delay committing funds until the last possible moment to minimize risk. The impact on engineering is that the race is now a series of sprints rather than a marathon. Culturally, this can be a significant change to the engineering organization. Given that the race is a sprint, engineering must be able to start fast, implement quickly, and deliver flawlessly on these programs. There is no slack in the schedule and a significant market penalty for delay. Some engineers are flexible enough to change speeds, but others will never be sprinters! The important factor for engineering management to recognize is that the race changes in a downturn and the engineering manager needs to select team members that can adapt and make sure they understand the new race.

Develop An Effective Outsourcing Strategy

Finally, the third factor to recognize is that outsourcing is not a quick fix to the cycles. A common misconception is that outsourcing can be used as “surge capacity.” Surge capacity means that the work is outsourced in times of high demand and then pulled back in house during a downturn to keep the internal capacity loaded.

While this may be possible for simple tasks, it is typically not practical for complex equipment. Outsourcing changes the task from one of doing to one of managing. This requires different work processes, people skills, and management structures to be implemented. Once this is done and working well, it is not practical to reestablish the internal capacity.

In general, companies that are creating complex capital equipment need to outsource high-level tasks with interdisciplinary content. The work is complex and requires special skills. Outsourcing should focus on resources that enhance internal capabilities and help in the ability to capture revenue that would otherwise be out of reach. It is not a short-term strategy that can be implemented just in time for a downturn. As an engineering manager, deciding which type of projects are suitable for collaborative development and establishing an organization capable of managing these is a long-term process that should begin well before the downturn comes.

Operating in a highly cyclical industry imposes unique challenges on an engineering organization. Acknowledging the macro forces and their impact on product roadmap priorities, the importance of engineering responsiveness, and an effective outsourcing strategy will allow engineering to be better prepared to adapt to the coming business cycles.